

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1.16. (Cancelled)

17. (Currently Amended) A method of providing extra traffic paths in a communication network comprising at least two protection channels associated to respective transmission channels, each of said at least two protection channels admitting an active state for carrying, in the presence of a failure in [[said]] at least one of the associated transmission channel channels, traffic to be carried by at least one of the associated transmission channel channels and a stand-by state, wherein at least one of the protection channel channels is adapted to carry extra traffic, comprising:
a step of running said at least two protection channels in a sub-network connection protection scheme,

whereby one of said at least two protection channels in said stand-by state is adapted to ensure recovery of extra traffic carried by the other another of said at least two protection channels while one of the following conditions is met:

said [[other]] another of said at least two protection channels is switched to said active state, and

said [[other]] another of said at least two protection channels is subject to failure.

18. (Previously Presented) The method of claim 17, comprising the steps of:
associating to each of said at least two protection channels corresponding input and output digital cross connects; and

running said sub-network connection protection scheme at said input and output digital cross connects.

19. (Previously Presented) The method of claim 17, comprising the steps of:
associating to each of said at least two protection channels corresponding input and output add-drop multiplexers; and
running said sub-network connection protection scheme at said input and output add-drop multiplexers.

20. (Previously Presented) The method of claim 17, comprising the step of providing in said communication network at least one ring structure including non-coextensive paths and the step of associating said at least two protecting channels to respective non-coextensive paths in said ring.

21. (Previously Presented) The method of claim 17, comprising the step of providing in said communication network a plurality of ring structures and the step of associating said at least two protection channels to two respective different rings of said plurality of rings.

22. (Previously Presented) The method of claim 21, comprising the step of selecting said two different rings as rings belonging to the same class of rings.

23. (Previously Presented) The method of claim 21, comprising the step of selecting said two different rings as rings belonging to different classes of rings.

24. (Currently Amended) The method of claim 21, comprising the step of providing non-preemptible unprotected traffic carried on non-preemptible channels in said network as

well as non-preemptible channels protected by a sub-network connection protection scheme, wherein said extra traffic is ensured an intermediate level of availability between the levels of protection provided by said non-preemptible channels and by said non-preemptible channels protected by [[a]] said sub-network connection protection scheme.

25. (Currently Amended) A communication network comprising:
at least two protection channels associated to respective transmission channels, each of said at least two protection channels admitting an active state for carrying, in the presence of a failure in [[said]] at least one of the associated transmission channel channels, traffic to be carried by at least one of the associated transmission channel channels and a stand-by state, wherein at least one of the protection channel channels is adapted to carry extra traffic, said at least two protection channels jointly defining a sub-network connection protection scheme, whereby one of said at least two protection channels in said stand-by state is adapted to ensure recovery of extra traffic carried by the other another of said at least two protection channels while one of the following conditions is met:

 said [[other]] another of said at least two protection channels is switched to said active state, and

 said [[other]] another of said at least two protection channels is subject to failure.

26. (Previously Presented) The network of claim 25, comprising corresponding input and output digital cross connects associated to each of said at least two protection

channels and wherein said input and output digital cross connects jointly define said sub-network connection protection scheme.

27. (Previously Presented) The network of claim 25, comprising corresponding input and output add-drop multiplexers associated to each of said at least two protection channels and wherein said input and output add-drop multiplexers jointly define said sub-network connection protection scheme.
28. (Previously Presented) The network of claim 25, comprising at least one ring structure including non-coextensive paths and wherein said at least two protecting channels are associated to respective non-coextensive paths in said ring.
29. (Previously Presented) The network of claim 25, comprising a plurality of ring structures and wherein said at least two protection channels are associated to two respective different rings of said plurality of rings.
30. (Previously Presented) The network of claim 29, wherein said two different rings belong to the same class.
31. (Previously Presented) The network of claim 29, wherein said two different rings belong to different ring classes.
32. (Previously Presented) A computer readable medium encoded with a computer program product capable of being loaded into a memory of at least one computer, the computer program product including software code portions for performing the steps of the method of any one of claims 17 to 24.